

Amendment
Serial No. 10/027,889
Page 6

Remarks

Claims 1-17 are pending in the application. Claims 1, 6-7, 12 and 16-17 have been amended. Reconsideration and re-examination of the application are respectfully requested for the reasons set forth herein.

2. 35 U. S. C. § 112

Claims 6 and 12-17 are rejected under 35 USC. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claiming the subject matter which applicants regard as the invention.

Applicants amend claim 6 to properly characterize the claimed invention as suggested in the original specification on p. 5, lines 30-33.

Applicants amend claim 12 to overcome the rejection for lack of antecedent basis for "said OPC." Applicants assert that the amendment to claim 12 also places claims 13-15 in condition for allowance, as suggested in the office action.

Applicants amend claims 16 and 17 to both be independent claims. Each claim now clearly captures features of the invention that relate to the manufacture of a plurality of screens. Applicants assert that claims 16 and 17 are now in condition for allowance.

Removal of the rejection of the claims under 35 U.S.C. 112, second paragraph, is respectfully requested.

4. 35 U. S. C. § 102

Claims 1-2, and 5 stand rejected under 35 U.S.C. 102(b) as being anticipated by Saulnier (U.S. Pat. No. 3,582,390, '390).

Amendm nt
Serial No. 10/027,889
Page 7

More particularly, claim 1 is rejected on asserted grounds that '390 contains the following combination of features for manufacturing a luminescent screen for cathode ray tubes having deposits of phosphor powder on an interior of a faceplate comprising:

- applying a film formulation over said deposits to form a lacquer film, said film formulation having at least one water-insoluble film-forming resin (i.e., lacquer) and water and hydrogen peroxide (i.e., at least two solvents, one of which (water) is a non-solvent for the water-insoluble resin) (col. 3, lines 42-54);
- applying a thin layer of aluminum on said film (col. 7, lines 50-69); and
- exposing the screen to sufficiently high temperature to volatilize any organic components (col. 8, lines 4-8).

Claims 2 and 5 which both depend from claim 1 also stand rejected as being anticipated by '390. Claim 2 recites that the lacquer material "contains at least one acrylic resin" and claim 5 recites that the film formulation "is applied by spin coating."

Applicants amend claim 1 to more clearly characterize what is meant by the two solvents. Specifically, applicants' intent was for the solvents to be non-aqueous. This is supported by the specification in that the specification does not mention the use of water as a solvent or non-solvent in the film formulations and only references non-aqueous solvents in the examples. Applicants assert that amended claim 1 contains a novel combination of features that is not anticipated by '390. Specifically, applicants amended claim 1 now recites:

- applying a film formulation over said deposits to form a lacquer film, said film formulation having at least one lacquer material and at least two non-aqueous solvents, one of said solvents being a non-solvent for at least one lacquer material;
- applying a thin layer of aluminum on said film; and
- exposing said screen to a sufficiently high temperature to volatilize any organic components.

Amendment
Serial No. 10/027,889
Page 8

Regarding the rejection to claim 2, applicants assert that the current novel combination of features in claim 2, which depend from amended claim 1, is not anticipated by '390. Claim 2 now has the following novel combination of features that is not taught in '390:

- applying a film formulation over said deposits to form a lacquer film, said film formulation having at least one lacquer material and at least two non-aqueous solvents, one of said solvents being a non-solvent for at least one lacquer material;
- applying a thin layer of aluminum on said film; and
- exposing said screen to a sufficiently high temperature to volatilize any organic components,
- wherein said lacquer material contains at least one acrylic resin.

Regarding the rejection to claim 5, applicants assert that the current novel combination of features in claim 5, which depend from amended claim 1, is not anticipated by '390. Claim 5 now has the following novel combination of features that is not taught in '390:

- applying a film formulation over said deposits to form a lacquer film, said film formulation having at least one lacquer material and at least two non-aqueous solvents, one of said solvents being a non-solvent for at least one lacquer material;
- applying a thin layer of aluminum on said film; and
- exposing said screen to a sufficiently high temperature to volatilize any organic components,
- wherein said film formulation is applied by spin coating.

Applicants assert that claims 1-2, and 5 are now in condition for allowance. Removal of the rejection of the claims under 35 U.S.C. 102(b) is respectfully requested.

Amendment
Serial No. 10/027,889
Page 9

7. 35 U.S.C. 103

Claims 4, 7, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saulnier '390 in view of Ritt et al. (U.S. Patent 5,474,866, '866).

Regarding the rejection to claim 4, Applicants assert that the current combination of features in claim 4, which depends from amended claim 1, are neither taught nor suggested, individually nor collectively, in '390 in view of '866. The novel combination of features in current claim 4 now include the following steps:

- applying a film formulation over said deposits to form a lacquer film, said film formulation having at least one lacquer material and at least two non-aqueous solvents, one of said solvents being a non-solvent for at least one lacquer material;
- applying a thin layer of aluminum on said film;
- exposing said screen to a sufficiently high temperature to volatilize any organic components,
- wherein said film formulation is applied by electrostatic spraying.

In contrast, '866 discloses electrostatic spraying of a film solution of an acrylic resin dissolved in MIBK (col. 6, 3-35) and '390 discloses (as pointed out in the rejection of claim 1 under 35 U.S.C. 102):

- applying a film formulation over said deposits to form a lacquer film, said film formulation having at least one water-insoluble film-forming resin (i.e., lacquer) and water and hydrogen peroxide (i.e., at least two solvents, one of which (water) is a non-solvent for the water-insoluble resin) (col. 3, lines 42-54);
- applying a thin layer of aluminum on said film (col. 7, lines 50-69); and
- exposing the screen to sufficiently high temperature to volatilize any organic components (col. 8, lines 4-8).

Amendment
Serial No. 10/027,889
Page 10

This combination of features assembled from '390 and '866 do not render current claim 4 obvious because such a combination of features do not suggest the novel combination of features in current claim 4.

Applicants amend claim 7 such that amended claim 7 now recites that the at least two solvents are "non-aqueous solvents." Applicants assert that the novel combination of features in amended claim 7 are not rendered obvious by '390 in view of '866. The novel combination of features in current claim 7 now include:

- electrostatically spraying a film formulation on to said fixed phosphor elements resulting in a lacquer film, wherein said formulation has at least one lacquer material and at least two non-aqueous solvents, one of said solvents being a non-solvent for at least one lacquer material;
- applying a thin layer of aluminum on said film; and
- exposing said screen to a sufficiently high temperature to volatilize any organic components.

The combination of features assembled from '390 and '866 do not render amended claim 7 obvious because such a combination of features do not suggest the novel combination of features in amended claim 7.

Claims 9-11 which depend from claim 7 stand rejected as well under 35 U.S.C. 103(a). Applicants request reconsideration of these claims in light of the amendment made to claim 7. Applicants assert that the novel combinations of features in current claims 9-11 which include the features in claim 7 are not rendered obvious by '390 in view of '866.

Applicants assert that claims 4, 7, and 9-11 are now in condition for allowance. Removal of the rejection of the claims under 35 U.S.C. 103(a) is respectfully requested.

8. 35 U.S.C. 103

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saulnier '390 in view of Lemer et al. (U.S. Patent 3,821,009, '009). It is asserted

Amendment
Serial No. 10/027,889
Page 11

in the office action that '390 does not teach the application of microcrystals on the lacquer film before applying the aluminum layer, but that '009 does teach such an application.

Applicants point out that claim 6 is amended in response to the rejection under 35 U.S.C. 112.

Applicants request reconsideration of the rejection to amended claim 6, which depends from amended claim 1. The novel combination of features in amended claim 6 is as follows:

- applying a film formulation over said deposits to form a lacquer film, said film formulation having at least one lacquer material and at least two non-aqueous solvents, one of said solvents being a non-solvent for at least one lacquer material;
- applying a thin layer of aluminum on said film;
- exposing said screen to a sufficiently high temperature to volatilize any organic components;
- wherein at least one type of microcrystals, which is selected from the group of boric acid, ammonium oxalate, or oxalic acid, is applied to said film prior to applying a layer of aluminum onto said film.

Applicants assert that this novel combination of features in amended claim 6 is not taught nor suggest by '390 and '009, individually nor collectively, and as such, claim 6 is not rendered obvious by '390 in view of '009.

Applicants assert that claim 6 is now in condition for allowance. Removal of the rejection of claim 6 under 35 U.S.C. 103(a) is respectfully requested.

9. Allowable Subject Matter

Applicants acknowledge the assertion in the office action that claims 12-17 would be allowable if rewritten or amended to overcome the rejection. Applicants submitted that amendments are made to claims 12, 16 and 17. Applicants assert that these amendment place claims 12-17 in condition for allowance.

Amendment
Serial No. 10/027,889
Page 12

Applicants also acknowledge the assertion that claims 3 and 8 would be allowed if rewritten in independent form to include the limitations of the original claims from which they depend. However, applicants assert that the claims 1 and 7 from which these claims 3 and 8, respectively, depend have been amended; as such, applicants submit that current claims 3 and 8 are allowable without amendments thereto.

CONCLUSION

Applicants submit that none of the claims, presently in the application, are indefinite under the provisions of 35 U. S. C. § 112, anticipated under the provisions of 35 U. S. C. § 102, or obvious under the provisions of 35 U. S. C. § 103. Consequently, the applicants believe that all of the claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Richard LaPeruta, at (717) 295-6207, so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Please charge the \$110.00 one-month extension fee associated with this application to Deposit Order Account No. 07-0832.

Amendment
Serial No. 10/027,889
Page 13

Respectfully submitted,

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